

## ABSTRACT OF THE DISCLOSURE

The invention includes computer instructions that operate to receive a selection of a center of motion for an assembly of computer aided design (CAD) models of a mechanical design and a selection of a component of the assembly associated with the selected center of motion. Once the selections are received, a range of motion for the component is determined. Then, the computer instructions operate to receive a selection of an origin for a grid pattern, where the grid pattern is automatically generated based upon the determined range of motion. This automatically generated grid pattern is automatically displayed at the selected origin. In one embodiment, the computer instructions are part of a mechanical design software application. In one embodiment, the mechanical software application including the computer instructions is embodied in a distribution storage medium.